Remarks

Claims 1-12 and 14-18 are pending herein. Claims 1-8 have been withdrawn as being directed to a non-elected invention. By this amendment, claim 13 has been cancelled, claims 9-12 and 14 have been amended, and new claims 16-18 have been added.

Claim 9 has been amended in part to clarify that the slurry is applied to the surface of the part and to add the features recited in claims 13 and 14. Claim 9 has been further amended to include the process steps recited in cancelled claim 13 and in claim 14.

Claim 10 has been amended to change the language "other elemental alloying additions" to --other elements or elemental alloying powders --. Support for this amendment can be found in the specification at, for example, page 6, line 10, and page 11, line 13.

Claim 11 has been amended to delete the language "Benjamin-Moore M66-79".

Claim 12 has been amended to correct a minor informality and to make the claim depend upon claim 9 instead of claim 11.

Claim 14 has been amended to make the claim depend upon new claim 16 instead of claim 13.

New claim 16 has been added which is the independent form of cancelled claim 13.

New claim 17 has been added which corresponds to claim 15 except that claim 17 depends upon claim 9.

New claim 18 has been added which is directed to a process of coating a turbine part which is subjected to high temperature operation during its life, comprising: cleaning a surface of the part, and coating the cleaned surface of the part with a slurry containing finely divided aluminum and/or aluminum alloy particles, wherein the slurry has a carrier which consists of a silicone alkyd paint. Thus, in new claim 18, the carrier is limited to a silicone alkyd paint.

In the Office Action, claim 12 is objected to; claims 10-15 are rejected under 35 U.S.C. §112, second paragraph; claim 9 is rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,171,704 to Mosser et al. ("Mosser"); claims 11 and 12 are

rejected under 35 U.S.C. §103(a) as being unpatentable over Mosser; and claims 9-12 are rejected under §103(a) as being unpatentable over U.S. Patent 4,960,817 to Spadafora ("Spadafora") alone or in view of U.S. Patent 3,102,044 to Joseph ("Joseph"). Claims 13-15 are said to be allowable if rewritten to overcome the rejection under §112 and to include all of the limitations of the base claim and any intervening claims.

In view of the remarks and amendments, Applicants respectfully request reconsideration and withdrawal of the objection and rejections set forth in the Office Action.

I. Objection to Claim 12

Claim 12 is objected to because at line 2 of the claim, the term "1.1" should be --1:1--.

Claim 12 has been amended herein to correct this informality.

II. Rejection of Claims 10-15 Under 35 U.S.C. §112

Claims 10-15 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claim 10 is said to be vague and indefinite because it is not clear whether the "other elemental alloying additions" contained in the coating are separate elemental particles or whether they are other elements that are additionally alloyed with the aluminum or aluminum alloy particles.

Claim 10 has been amended to change the language "other elemental alloying additions" to --other elements or elemental alloying powders --. Applicants respectfully submit that amended claim 10 is not vague or indefinite.

Claim 11 is rejected because it contains the trademark/tradename "Benjamin-Moore M66-79 silicone alkyd high heat aluminum paint".

Claim 11 has been amended to delete the trademark/tradename. Applicants respectfully submit that amended claim 11 is not vague or indefinite.

Claims 12-15 are rejected because they do not correct the deficiencies of claim 11. In view of the amendments to claims 10 and 11 herein, Applicants respectfully request the withdrawal of the rejection of claims 12, 14 and 15 (claim 13 has been cancelled).

III. Rejection of Claim 9 Under 35 U.S.C. §102(e)

Claim 9 is rejected under 35 U.S.C. §102(e) as being anticipated by Mosser.

Mosser is cited for disclosing a method for coating a lipskin or a part within the nacelle on an aircraft. According to the Office Action, since the nacelle covers the aircraft's turbine engine and because it is exposed to temperatures of up to 232°C during deicing, it meets Applicants' limitation of a "turbine part which is subjected to high temperature operation during its life."

Mosser is further cited for teaching a process of providing a protective coating to the lipskin or nacelle comprising the steps of: cleaning the part, coating the part with a first base coating, and then coating the part with a second top coating. Mosser is also cited for teaching that the top coat may comprise a silicone paint with aluminum flake pigment, more specifically that the silicone paint may be a silicone alkyd paint. According to the Office Action, because the top coat in Mosser includes both a resin and particulates, it is necessarily a slurry-type coating.

Applicants respectfully submit that claim 9 is not anticipated by Mosser.

In the method of amended claim 9, a slurry containing aluminum and/or aluminum alloy particles and a carrier of a commercially available silicone alkyd paint is applied to the surface of a turbine part. On the other hand, Mosser teaches that the part therein is coated first with a basecoat and then with a topcoat, the topcoat preferably being an aluminum silicone paint. In other words, in Applicants' claimed method, the aluminum/silicone alkyd paint slurry is coated directly onto the surface of the part, whereas, in the Mosser method, an aluminum/silicone alkyd paint material is coated onto a

basecoat, not on the surface of the part itself. Mosser does not teach or suggest coating the surface of the part itself with an aluminum/silicone alkyd paint material, particularly an aluminum/silicone alkyd paint slurry.

Furthermore, claim 9 has been amended herein to include the process steps recited in claims 13 and 14. Mosser does not teach or suggest these steps.

Thus, for at least these reasons, Applicants respectfully submit that Mosser does not anticipate claim 9.

IV Rejection of Claims 11 and 12 Under 35 U.S.C. §103(a)

Claims 11 and 12 are rejected under §103(a) as being unpatentable over Mosser.

With respect to claim 11, the Office Action notes that Mosser does not teach that the aluminum flake particles have a particle size of about 350 mesh or that the silicone alkyd paint carrier is specifically a Benjamin-Moore M66-79 silicone alkyd high heat aluminum paint. It is the Examiner's position that if the particle/flake size is too small, then there would not be enough surface area to provide the pewter color or dulling effect, and if the particle sizes are too big, then they might protrude from the surface of the coating.

With respect to claim 12, the Office Action states that Mosser does not teach a ratio of paint to powder of 1:1. Mosser is said to teach that the amount of aluminum flake in the top coat compositions may vary. According to the Office Action, it would have been obvious to have determined the optimum amount of aluminum flake as a matter of design preference in order to provide a desired pewter color to match the anodized aluminum thereunder and to reduce the gloss of the paint by a desired amount.

Applicants respectfully submit that claims 11 and 12 would not have been obvious over Mosser. Claim 11 depends upon claim 9, and claim 12 depends upon claim 9. Thus, claims 11 and 12 both include the feature of the aluminum/silicone alkyd paint slurry being coated on the surface of the part, and also include the process steps recited in claims 13 and 14. As Applicants discussed above, Mosser does not teach or suggest coating the surface

of the part itself with an aluminum/silicone alkyd paint material, particularly an aluminum/silicone alkyd paint slurry. Rather, Mosser teaches coating a basecoat with an aluminum/silicone alkyd paint material, the basecoat being the layer coated on the surface of the part. Furthermore, Mosser does not teach or suggest the process steps recited in claims 13 and 14.

Applicants submit that because Mosser does not teach or suggest coating the surface of the part with an aluminum/silicone alkyd paint slurry, Mosser would not have made it obvious to coat the surface of the part with an aluminum/silicone alkyd paint slurry having the particular particle size or the paint-to-powder mass ratio recited in instant claims 11 and 12, respectively.

Thus, for at least the foregoing reasons, Applicants respectfully submit that Mosser would not have rendered instant claims 11 and 12 obvious.

V. Rejection of Claims 9-12 Under 35 U.S.C. §103(a)

Claims 9-12 are rejected under §103(a) as being unpatentable over Spadafora alone or in view of Joseph.

Spadafora is cited for disclosing a method for coating a turbine part which is subjected to high temperature operation during its life comprising coating the part with a slurry containing aluminum particles and a silicone alkyd copolymer resin as part of the carrier (the carrier is a blend of two resins – a silicone resin and a silicone alkyd copolymer resin). The Examiner states that the term "paint" as used in line 7 of claim 9 is a broad term interpreted as meaning any material that may form a film. According to the Office Action, while Spadafora does not specifically teach that a commercially available silicone alkyd is used in the carrier, it would have been obvious to have used a commercially available silicone alkyd resin/paint because Spadafora does not provide instructions for making the silicone alkyd resin itself.

Although noting that Spadafora does not teach a first step of cleaning the substrate part prior to coating, the Examiner states that it is a well known process step in the coating

art. In addition, the Examiner states that it would have been obvious to have cleaned the turbomachinery part of Spadafora prior to coating to increase the adhesion between the coating and the substrate.

Alternatively, Joseph is cited for teaching a method of applying a high temperature corrosion-preventive coating to a metal substrate including a first step of cleaning the substrate surface. According to the Office Action, it would have been obvious to have cleaned the turbomachinery part of Spadafora prior to coating, as taught by Joseph, to increase the adhesion between the coating and the substrate.

With respect to claim 10, Spadafora is cited for teaching that zinc dust may be added to the coating composition.

With respect to claim 11, Spadafora is cited for teaching that the average particle size of the leafing aluminum is around 25 microns. The Office Action states that it is not known whether this meets Applicants' limitation that the aluminum particles have a particle size of about 350 mesh. However, the Examiner states that if the aluminum particle size is too small, there would not be enough surface area to overlap and provide a physical barrier against corrosion, and if the particle sizes are too big, the particles might protrude from the surface of the coating. The Examiner states that it is well settled that determination of optimum values of cause-effective variables such as these process parameters is within the skill of one practicing in the art.

With respect to claim 12, Spadafora is cited for teaching that the combined amount of resins and carrier is in the range of 16.4% to 17.2% by weight and the amount of leafing aluminum is 5.8 to 19.7% by weight.

Applicants respectfully submit that claims 9-12 and new claim 17 (which depends upon claim 9) would not have been obvious over Spadafora alone or in view of Joseph.

As noted above, claim 9 has been amended in part to include the features recited in claims 13 and 14. Spadafora does not teach or suggest the heat treatment steps now included in claim 9. Thus, even if the substrate-cleaning step recited in Joseph were incorporated into Spadafora, the result would not be the process recited in instant claim 9.

Therefore, for at least this reason, Applicants submit that claims 9-12 and 17 would not have been obvious over Spadafora alone or in view of Joseph.

VI. Allowable Subject Matter

According to the Office Action, claims 13-15 would be allowable if rewritten to overcome the rejection under §112 and to include all of the limitations of the base claim and any intervening claims.

New claim 16 represents the independent form of cancelled claim 13. Claim 14 has been amended so that it depends upon new claim 16. Claim 15 depends upon claim 14 and, thus, indirectly depends upon new claim 16.

Thus, Applicants respectfully submit that claims 14, 15 and 16 are in allowable form.

VII. New Claim 18

Applicants respectfully submit that new claim 18 is patentable over Mosser and over Spadafora alone or in view of Joseph.

Claim 18 is directed to a process of coating a turbine part which is subjected to high temperature operation during its life, comprising: cleaning a surface of the part, and coating the cleaned surface of the part with a slurry containing finely divided aluminum and/or aluminum alloy particles, wherein the slurry has a carrier which consists of a silicone alkyd paint. Thus, in new claim 18, the carrier is limited to a silicone alkyd paint.

(1) Mosser

In the process of Applicants' claim 18, a slurry containing aluminum and/or aluminum alloy particles and a carrier of a silicone alkyd paint is applied to the surface of a turbine part. Thus, in the process of claim 18, as in the process of claim 9, the slurry is applied to the surface of the part itself. As noted above, Mosser teaches that the part therein is coated first with a basecoat and then with a topcoat, the topcoat preferably being an aluminum silicone paint. Mosser does not teach or suggest coating the surface of the

part itself with an aluminum/silicone alkyd paint material, particularly an aluminum/silicone alkyd paint slurry. Thus, for at least this reason, Applicants submit that claim 18 is patentable over Mosser.

(2) Spadafora Alone or in view of Joseph

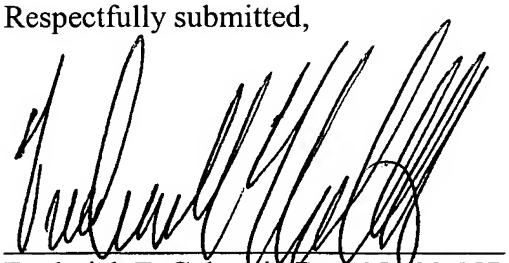
Claim 18 recites that the carrier consists of a silicone alkyd paint. Spadafora requires that the silicone alkyd copolymer resin therein be used in combination with a silicone resin. Spadafora does not teach or suggest the use of a carrier consisting of a silicone alkyd paint. Joseph does not teach the use of a silicone alkyd paint. Thus, the combined teachings of Spadafora and Joseph do not suggest the use of a carrier consisting of a silicone alkyd paint.

Therefore, for at least this reason, Applicants submit that claim 18 is patentable over Spadafora, either alone or in combination with Joseph.

VIII. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request that the objection and rejections set forth in the Office Action be withdrawn and that claims 9-12 and 14-18 be allowed.

Respectfully submitted,



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